

THE ORE DIGGER

NEWSPAPER

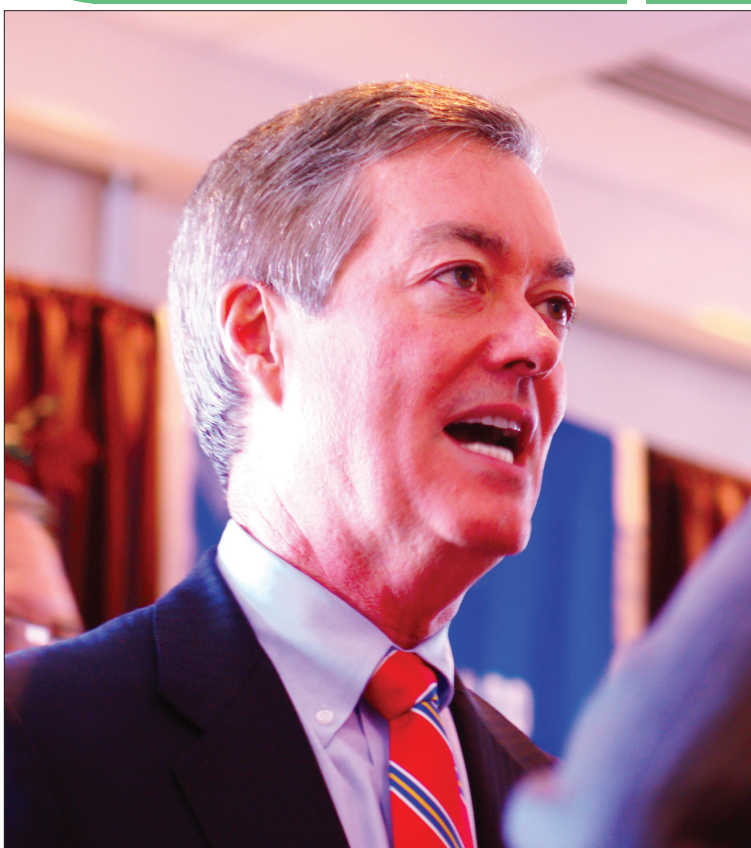
Volume 89, Issue 15 February 2, 2009

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Former Colorado governor Bill Owens spoke at Mines Thursday as part of the William H. Erickson Distinguished Lecture Series.

Owens's optimistic oration

Tim Weilert
Content Manager

"In 24 years of elected office I learned at least one important fact: when it comes to public policy, there is a huge gap between perception and reality." Addressing a full room, former Colorado governor Bill Owens came to speak at CSM last week. Owens, who had been invited to speak as part of the William H. Erickson Distinguished Lecture Series, continually focused on the achievements of democracy over the last century while also expanding on his ideas about perception and reality.

"I'm an optimist, though I'm certainly still feeling many of the same economic challenges you are," said Owens as he explained how his personal investments and projects had felt the current economic downturn. "It is amazing how much attention we pay to those who predict doomsday is just around the corner," continued Owens. He went

on to cite several reports and books from the 1970's and 80's which all predicted a desolate planet by the year 2000. "These are all widely read, widely commented upon, and wildly wrong," said Owens, "Oddly, many of the very areas where we're the most pessimistic are the very areas where we're improving the most."

Owens went on to share stories about bets he had made when challenged on environmental issues. The bets concerned the historical state of American forest coverage and Colorado's air quality. According to Owens, he won both bets by using statistical data to show improvements in both areas.

As he moved into the main section of his speech, Owens said, "I will share with you a few numbers in some widely diverse fields to make my point that things are in fact getting better." First, the topics of child mortality rates and health were covered. Quoting the Center for Disease Control, Owens said,

"The U.S. death rate is at a record low, yet most Americans are not aware of this data."

Education, literacy, environmental issues, food and water supplies, and energy usage were all topics of conversation. In each category Owens compared current statistics to historical data, highlighting where improvements have been made.

"Why aren't these facts better known?" asked Owens, "I think there are two primary reasons why we seem so predisposed to the negative." The press was the first reason Owens claimed the gap between perception and reality has grown. "Reporters want space, they want the front page, and they're directly competing with each other to make a story," said Owens, "It shows in the pervasive conflict, negativity, and problems we see on the front page and on television."

SEE HARD ON PAGE 3

NREL and Li-ion battery control

Tim Weilert
Content Manager

Lithium ion batteries are everywhere today. From cell phones, iPods, and laptops to hybrid automobiles, Li-ion batteries have changed how modern energy needs are met. However, do not let their popularity mislead you; Li-ion batteries are still being researched and developed by the National Renewable Energy Laboratory (NREL). Dr. Kandler Smith came to Mines last week to discuss the intricacies of Li-ion chemistry and control with the engineering department.

Smith spoke on three main topics: the need for expanded hybrid vehicle research, NREL's current research and development, and his dissertation on Li-ion battery control. "Our main focus at the Department of Energy is light-duty vehicles," said Smith, "they account for about 62% of all transportation. If you can improve the fuel economy of light-duty vehicles it will make huge strides in terms of our use of foreign oil." Smith continued to describe several hybrid and battery operated vehicles currently on the market. "The one downfall of present day hybrids is that they only use petroleum to drive the car."

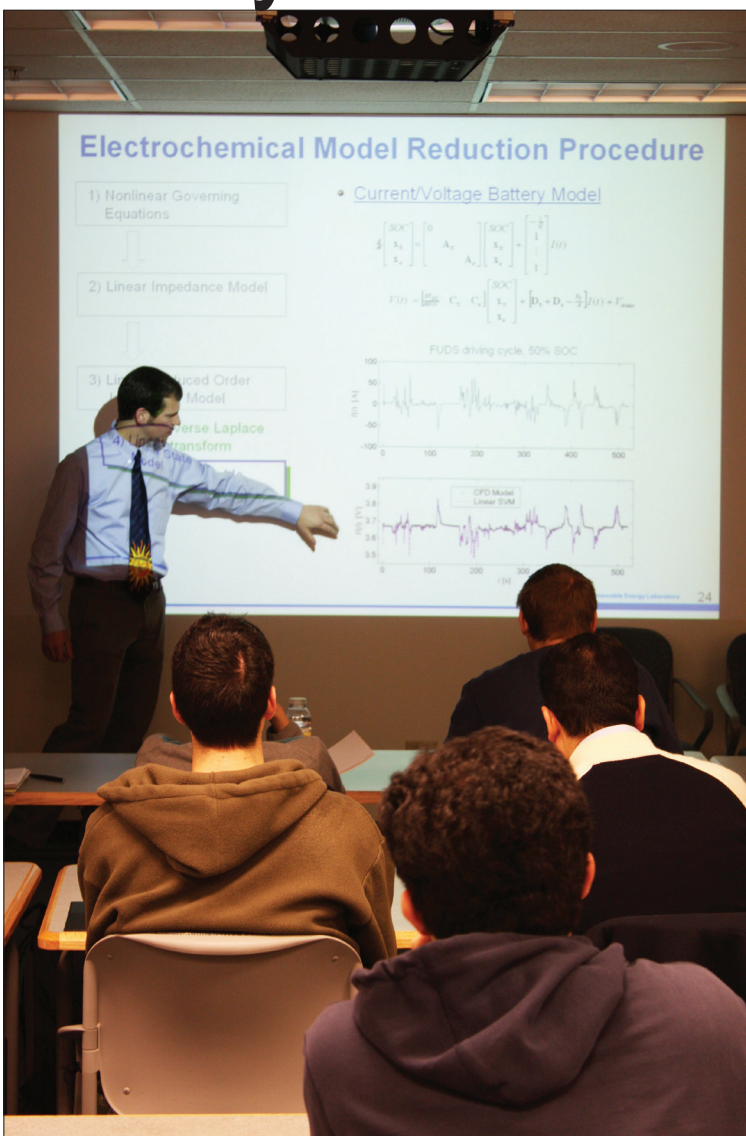
NREL has played a part in the hybrid world, creating standards, power, and energy requirements for batteries. Furthermore, NREL has

focused on energy storage, and, according to Smith, "Our primary focus is thermal characterization and modeling of batteries. Temperature really kills the life of batteries, so you need to eliminate any hot spots and design thermal management systems that keep the temperature between 20 to 35 degrees Celsius." NREL's battery group works for the Department of Energy and has interactions with automakers and battery manufacturers.

The rest of Smith's presentation, which depended heavily on his PhD dissertation, covered the technical specifics of electrochemical control. Specifically he talked about the electrochemical modeling of batteries, model reduction procedure, and examples applications of estimation and control via Kalman filters and controllers. "Basically what we're doing is taking current, voltage, and temperature measurements, which are on board the system," said Smith, "Then turning those into minimum or maximum instantaneous limits which the supervisory controller needs to observe."

However, Smith allowed for improvement in the commercial applications. "Some next steps, which I haven't worked on yet, would be identifying the model directly from experiments," said Smith, "In the future the algorithms should be adaptive, and the models should be lower-order."

"The one downfall of present day hybrids is that they only use petroleum to drive the car."



CHRISTOPHER FEHN / OREDIGGER

Dr. Smith explains a graph in his presentation on lithium-ion batteries.

Ultra-cold molecules

David Underwood
Staff Writer

Robin Côté, professor of physics at the University of Connecticut, works with ultra-cold atomic and molecular gases. Ultra-cold molecules and atoms are those whose temperatures have been reduced to around 1 μ K.

Once the atoms reach this point, they can be very valuable for usage in "super chemistry," Bose-Einstein Condensate, high precision spectroscopy, and possibly quantum computing in the future. Getting the molecules or atoms to this point takes a good deal of effort and lots of high tech tools. Côté discussed three major methods of cooling; processes called Buffer Gas Cooling, Stark Deceleration, and Evaporative Cooling.

Buffer Gas Cooling, according to Côté, "Is almost like a room full of people that are very close together and moving very slowly, helium in this case. Someone else, a fast particle, runs into the group of people and slows down. Eventually the fast particle slows down to the rest of the group." This process is used to cool larger molecules down to the temperature of helium, which was cooled using various series of vacuum pumps and other tools.

A Stark Decelerator uses a series of "electric rods" that slow down the particle each time it crosses a new set of rods.

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Scientific discoveries this week

Patrick Beseda, Staff Writer

New York, NY: A biotech company will begin a study on stem cell treatments of recent spinal cord injuries. The company will inject up to ten patients with stem cell based treatments. This study will be the first in the U.S. of embryonic stem cells on humans.

Karlsruhe, Germany: Developed by scientists at the Karlsruhe Institute of Technology in Germany, a new technology could produce a liquid fuel for just \$2.49 per gallon. The fuel, made from synthesized plant material, would be an entirely renewable source of energy. The researchers report that if the process were set up in the right way, the technology could only get cheaper. The innovative process comes from the efficient treatment and transportation of the biomass needed to create the fuel. While still more expensive than gasoline, and equally as polluting, a renewable liquid fuel holds an advantage over fossil fuels.

Dallas, TX: A new study shows that single brain cells can hold memories. It was previously thought that memories were held by the interaction between brain cells and electrical pulses in nerves. The study, by Texas Southwestern Medical Center, has shown that individual nerve cells, called neurons, can, by themselves, hold memories for up to a minute. "It's more like temporary storage, like RAM memory in a computer," said Don Cooper, professor of Psychiatry. The discovery will lead to a better understanding of addiction, attention disorders, and memory loss.

Manchester, UK: Scientists at the University of Manchester have produced ground-breaking research on a relatively new material called Graphane. Discovered 5 years ago, Graphane is a single-atom thick material developed from Graphene, a highly conductive material used in electronics. Unlike its counterpart, Graphane has interesting insulating properties. This research clears the way for developing more Graphene-derived materials which can be used both for increasingly smaller transistors and quantum computing.

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Headlines from around the world

Emily Trudell, Staff Writer

Redoubt Volcano, located roughly 100 miles from Anchorage, Alaska, is set to blow in the near future. People living in the area have been encouraged to buy dust masks and goggles.

A mother of six gave birth to **octuplets** in California, ranging from one pound, eight ounces, to three pounds, four ounces. The mother had undergone fertility treatments before the pregnancy.

The **Republican National Committee** elected its first African American leader, Michael Steele.

The U.S. government decided not to renew a security contract with **Blackwater Worldwide**, a security firm that has been working with the United States in Iraq. The government noted a 2007 incident wherein 17 Iraqis were killed in a shootout with Blackwater security guards.

Joseph Moser, 87, a World War II veteran who was shot down over Nazi territory and spent time in the infamous Buchenwald Concentration camp, was honored with the **Distinguished Flying Cross**, meant to honor those displaying "heroism or extraordinary achievement while participating in an aerial flight."

The **Food and Drug Administration** announced that a criminal investigation is underway in a Georgia plant where the salmonella outbreak in **peanut butter** products is thought to have originated. Nationally, over 500 salmonella cases have recently been linked to peanut butter consumption.

The London home of singer **Amy Winehouse** was robbed this

week while the star was vacationing in the Caribbean. Reportedly, a flat screen TV, recording equipment, and guitars were some of the items stolen.

A bus overturned roughly 27 miles south of the **Hoover Dam**, killing at least seven and injuring at least ten. The bus was carrying a group of Chinese tourists from Las Vegas to Arizona.

The number of cases of **cholera in Zimbabwe**, Africa, has risen past 60,000. Experts report that the spread of the disease is not under control nor is it slowing, with poor sanitation in the affected areas.

Pirates have hijacked another ship in the Gulf of Aden, one of the most dangerous places in the world for piracy. The ship is a German-owned tanker carrying a crew of thirteen.

The United States Justice Department is currently investigating former CIA officer to Algeria **Andrew Warren**, who is accused of drugging and raping two Algerian women while he held the position.

Cuban President **Raul Castro** visited Russian President **Dmitri Medvedev** to boost foreign relations between the two nations. This is the first time since the Cold War that leaders from **Cuba** have visited the Russian capital.

Uzbekistan officials claim to have found the **world's oldest woman**. Tuti Yusupowa was born on July 1, 1880, making her 128 years old.



Catalysts speed things up

Erik Lord
Staff Writer

"In nature, no perfect three-dimensional bulk material exists," explained Devina Pillay, a researcher from the Naval Research Laboratory (NRL) in Washington, D.C. "Every material known to man has a surface and in certain fields, such as in the field of catalysis, some of the most interesting and vital chemistry occurs at the surface." Pillay, who studies the behavior of material surfaces and interfaces, spoke Thursday as part of the Department of Chemical Engineering's Shell Seminar Series. She discussed her current work to create more efficient fuel cells and catalytic devices.

Pillay focused her presentation on applications in fuel cells and catalytic converters like those found in automobiles, where catalytic reactions are generated. She explained that catalysis is simply a chemical process where reaction rates are accelerated by the presence of a catalyst—in these cases, specific metals and metal oxides chosen for their abilities to adsorb gaseous molecules such as carbon monoxide, hydroxide, and diatomic oxygen.

Many of these catalytic materials have been proven highly successful. For instance, gold nanoparticles grown on rutile (TiO₂) have been shown to oxidize carbon monoxide gas at very low temperatures. "Unfortunately there have been problems in stabilizing these gold particles," ex-

plained Pillar. "In some cases they sinter...in other cases they agglomerate...causing them to lose [their] favorable reactivity." So she turned her attention to improving the reactivity of these catalytic surfaces.

Using density functional theory, Pillay was able to use relative atomic positions to characterize the electronic structure of the material surfaces. Working in the NRL's Center for Computational Materials Science, Pillay and her colleagues have determined that the interaction between adsorbed species and the metal surfaces was governed by the energy level of the d-band electrons in the metal. "The closer the d-band is to the Fermi energy," she explained, "The stronger the adsorption."

This rate of oxidation reactions has remained one of the limiting reactions in fuel cell design. Oxygen reduction reactions (ORR) occur on the cathode side of polymer electrolyte fuel cells, which is typically constructed of platinum. The problem is that these reactions have been limited to relatively slow rates on pure platinum surfaces. Additionally, these platinum nanoparticles have been easily poisoned by common contaminants in the incoming air stream, such as sulfur, that block the relevant reactants from adsorbing to the surface. "The cost and efficiency need to be increased in order for fuel cells to become an everyday reality," said Pillay.

Pillay explained that alloying

platinum with 3D transition metals such as nickel and cobalt has led to elevated reactivity nearly three times that of pure platinum. Even more promising, the alloying elements suppressed the contamination by impurity molecules.

"The addition of [the 3D transition metals] caused platinum to more weakly bind O₂ and OH, improving its activity," she explained. These results immediately offered the potential for much higher efficiencies. Pillay wanted to characterize this effect, "We wanted to know if this was primarily an electronic or geometric effect."

Through computational modeling and experimentation, Pillay found that geometry was the dominant effect. "Alloying increased the strain of the platinum metal collector, lowering the d-band, and increasing adsorption," Pillay said. "We found that clustering effects [were] also reduced [on the surfaces of] Pt₃M alloys." The increased oxidation rates, therefore, were due primarily to the restructuring of the atomic surface.

Surfaces have long been one of the most interesting aspects to study in materials research. Through her studies of surface chemistry, Devina Pillay has opened doors for further research in the field of surface chemistry. Her work has progressed science closer to more efficient catalytic processes and proven that the most profound discoveries can occur on the very surface of materials.

Public Safety Committee

Benjamin Johnson
Staff Writer

The Public Safety Committee is a vital part of the welfare of CSM students. Their projects range from crosswalks on campus to new parking initiatives. The committee considers issues students rarely consider and topics that are discussed and complained about nearly every day. With limited funding, the committee has been deliberating over their focus for this semester's projects.

Future projects include additional crosswalks designed to improve pedestrian flow. One place that has been about a topic of discussion is at intersection of Elm St. and 19th St. Currently there is no stoplight, crosswalk, or even a stop sign at that location. This means that students who want to access the old Ford building and its parking lot have to wait until a break in traffic to cross the street. This poses the potential danger that

a motorist would not see a person because there is nothing to indicate that people can cross the street. The lack of people who do need to cross the street and the proximity to 6th Ave. might lead to a large traffic buildup are problems that have stalled the project and perhaps ended it all together.

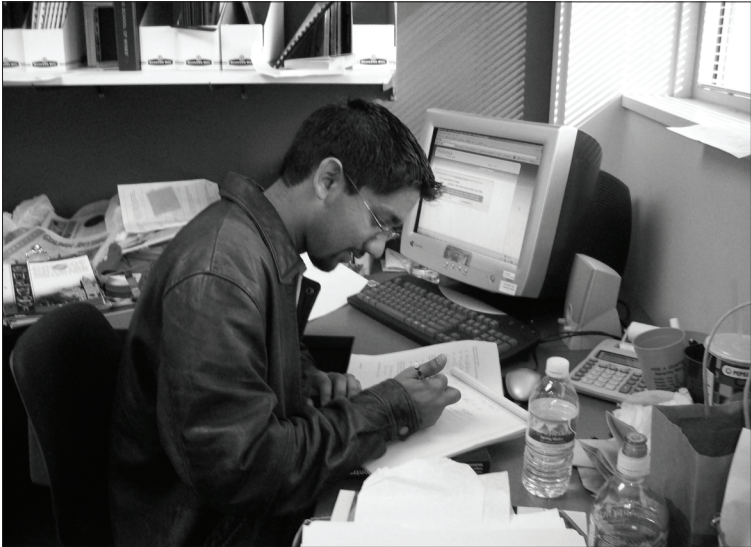
Another problem spot is at the intersection of 6th Ave. and 19th St. where many students cross to get to Mines Park. Currently, there is only sidewalk on parts of both sides of the road which has resulted in students crossing the street without any safe way to do so. This project will be started in the near future and is one of the top priorities of the committee. However, because of budget cuts on campus and around Golden, the project does not look like it will be started this semester.

Other safety concerns that the committee wants to improve upon relate to lighting and parking. The north part of campus, specifically near Volk

Gymnasium and Coolbaugh Hall, is poorly lit at night and people have complained that they feel unsafe in the area when it gets dark. Anant Pradhan, vice president of the Public Safety Committee, agrees that the area is "fairly dark and can be uncomfortable, and worrisome to travel there." The committee wants to add streetlights or lampposts in the area to solve the problem.

The lack of parking places for students is another issue that has existed for years. New emphasis was placed on adding another parking lot when a student was killed on campus partly due to the blind spots that occur because of on-street parking; a new parking structure is another priority of the committee to help with this problem.

There have been complaints that Public Safety is not tremendously effective in improving the safety on campus. Pradhan said about Public Safety, "My personal experiences have not overall been positive. I don't know if in the past they have effectively worked on various jobs like parking but this year there have been far fewer complaints." He also said that they have "been doing better than in the past but I can't justify why." The committee has many projects to improve campus safety but because of a limited budget and the need for approval from different agencies in Golden and Denver there is often a lack of support and resources to start new projects. This was evident when the Golden City Council turned down plans to put a crosswalk heading from the Weaver Towers to the Student Recreation Center. "You can't get complete campus change all at once; start with little projects," said Pradhan



BENJAMIN JOHNSON / OREDIGGER

Hard Times

CONTINUED FROM PAGE 1

The second reason for American negativity Owens gave was interest groups such as the AARP and the Sierra Club. "They have to exaggerate the negative in order to get members and publicity which then drives congressional action." Almost every category was covered, from unions to college presidents. "Everyone has a complaint, and it's repeated and exaggerated by a press which is ready to be vocal about those complaints," said Owens, "There is a cacophony of negative news and views we are continually being bombarded with."

Owens ended on an optimistic note by trying to answer the question "If things have been getting better, why?" Owens believes that a rise in freedom and democracy has led to an increase in markets which have driven progress. "Democracies do not fight one another, there has never been a case where two actual democracies have gone to war with one another." However, Owens claimed that

such democracy is not a partisan issue. The speech ended with a quote from 18th century British politician Edmund Burke, "All that is necessary for the triumph of evil is that good men do nothing."

Following the presentation Owens fielded a few questions from the audience. Owens answered questions concerning state pension funds, Colorado's natural resources, and specifics of his views. An air of respect pervaded every question, even when one member of the audience disagreed with the former governor's democracy-centered worldview. Overall, the presentation was an interesting look at a former politician's views. Although he offered very little advice for the future, Owens visit represented an important part of progress: the ability to hear differing views and collaborate respectfully. Whether perception has really been skewed as much as Owens claims it has is a debatable topic, and one that will hopefully continue to be discussed.

Applying ultra-cold molecules

CONTINUED FROM PAGE 1

Côté compares it to running up stairs: "Each time you go up a step you loose energy. As the molecule goes, you continually raise the floor up. Once the molecule is at the top, it is virtually stopped; it has very little energy and is very cold." The Stark Decelerator makes the molecule climb a virtual staircase made of energy. This process, however, works only with molecules that have a dipole moment. Evaporative Cooling, just as when water evaporates, removes the 'hottest' molecules, those with the most kinetic energy, leaving behind a much colder remnant.

Once at the "ultra-cold" level, these gases display very interesting behavior. Gases show a layering effect, with areas of large concentrations of atoms, and areas with relatively few. When stirred, they create mini vortices whose centers actually have a density of zero. Bose-Einstein Condensates, an extremely cold group of particles begin to lose their individuality. Côté explained this idea by saying, "they begin to act as one unit. Although the particles are not near each other, they behave as if they were somehow in contact."

One of the current theories for designing a quantum computer

requires two of the ultra-cold gas particles coming together to form a molecule in an excited state. As Professor Côté explained, "they must be very close to make this transition [into the excited state]. They don't spend very much time together when they collide, so there is a very low probability of this occurring."

Feshbach Resonance is when

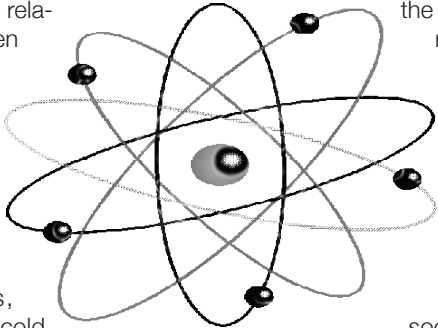
"Each time you go up a step you loose energy. As the molecule goes, you continually raise the floor up. Once the molecule is at the top, it is virtually stopped; it has very little energy and is very cold."

two ultra cold molecules temporarily change their "spin," an inherent quantum

mechanical property of particles, and spend an especially long time next to each other, making it possible to put them into an excited state. Through this process of bringing molecule into and out of an excited state, one can actively, as Côté put it, "Switch on and off the dipoles." This allows the molecules to act similar to the ones and zeros in a computer.

If computers are to follow their past trends, as described in Moore's law, it will soon be necessary for them to work

on a quantum scale, making the science of ultra-cold molecules at the forefront of necessary technologies. Many researchers, including professor Côté will continue to push forward the science and will undoubtedly see many new breakthroughs.



LILY GIDDINGS / OREDIGGER

TECH BREAK

Ian Littman, Tech Break Columnist

Wanted to try your hand at Linux? Needed to run SolidWorks on a Mac? Or Word on Linux, if you're into that sort of thing? Thanks to the modern marvel of virtualization, you don't even have to reboot your computer to experience two or more operating systems at once.

Before the more technical people rant and rail about the long life of virtualization software, back in the days of what is now Microsoft's Virtual PC, let this be taken into account. Virtualization took off when Apple turned Intel. At that point, people could switch between Windows (or Linux) and OS X with a simple reboot, but a few companies figured they could do better. Soon, they did so by harnessing the power of Intel's newest processors, VMWare, and

Parallels developed programs that could run Windows within OS X with the greatest of ease

In short, the virtualization software sets up a "virtual machine" with hardware mirroring a "real" computer.

and with only a 15 to 20 percent performance hit versus running Windows alone.

The process? In short, the virtualization software sets up a "virtual machine" with hardware mirroring a "real" computer, on which Windows XP Professional, Windows Vista Business, Ultimate (according to Microsoft's license terms), or pick-your-Linux-flavor can run, pretending the

virtual machine is the real thing. It takes innovative programming to emulate hardware in software and downright brilliant work to make said software go at a respectable clip. However, the job isn't too terrible, since all major operating systems can run on the same processor type (x86), which also happens to be standard fare for the vast majority of

desktops, laptops, and servers.

One problem. VMWare Fusion and Parallels cost a good bit of money, and they're Mac-only products so, if you want to run Linux within Windows or the other way around, you're out of luck. On the other hand, Microsoft's Virtual PC software is rather anemic in

its features. Enter Sun, with their free VirtualBox suite. It's rough around the edges in places. Copying files from the host operating system to a guest is like copying files over a network versus drag-and-drop ability in Fusion and Parallels. However, the software runs a good bit faster than its for-pay competitors, and you can even get an open-source version to pick apart as you will.

VirtualBox also exemplifies the

VirtualBox also exemplifies the features that make virtualization so cool.

features that make virtualization so cool. You can install the client on Windows, Linux, or Mac, and it'll work very similarly on all three

platforms. As will the virtual machines. Copy over your disk image file (in all likelihood, smaller than an equivalent install on a real machine) and your settings file, then start the system up on your new "host." That's it; all your files and settings are transferred over. Future of computing? Possibly.

The bottom line is that if you're having problems running XYZGrapher in Windows Vista or if you like Office 2007 better than Office 2008, grab some virtualization software (VirtualBox is a good choice) and a copy of Windows XP from AC&N, and you'll be good to go. Speed-wise, you won't be playing 3D games in a virtual machine, but for everything else, you are golden, no formatting, rebooting, or hair-pulling required.

New recycling receptacles

Tim Weilert
Content Manager

As a campus that is devoted to "earth, energy, and environment," the Colorado School of Mines has slowly, but persistently, become greener. With the new semester came new options for waste management as Environmental Health and Safety (EHS) introduced single stream recycling receptacles to the Mines campus.

"We continually try to facilitate recycling around campus to make it easier for the students, staff, and faculty to participate," said Gayle Elliott of EHS. The receptacles, which have blue lids and feature the recognizable recycling symbol, can handle "single stream" recyclable items and are one part of EHS's continuing efforts to promote sustainability. "Single stream recycling," according to Elliott, "includes such a wide variety of items that if used properly, it should reduce the volume of trash which is hauled to the landfill." However, some items should not be placed in the receptacles. These include items contaminated with food, any type of fabric, and plastic bags (which are easily caught in sorting machines).

When asked about EHS's next step, Elliott said, "The campus is planning to eventually change over to "Single Stream" recycling only. Presently, there is a pilot program being evaluated in Guggenheim, Alderson Hall and Weaver Towers. We have provided a Single Stream container

to each office, classroom, and dormitory room. Office and classroom containers are being regularly emptied by the buildings' custodial staff and transported to a central location for pickup. In Weaver Towers, there are recycle bins next to the regular trash bins. Residents are responsible for taking recyclables from their rooms to the "Single Stream" containers on the main floor. EHS student workers transport materials from the central locations in buildings to the campus recycling facility. The results from the pilot program will guide us in further reducing landfill use and maximizing resource recovery."

Elliott stressed the need for campus-wide participation when she said, "We will continue to support programs which are environmentally and fiscally responsible. We see that the greatest improvements in recycling could be achieved by universal participation by students, staff and faculty."

Acceptable items for single-stream:

- Paper
- Plastics 1-7
- Cardboard
- Magazines
- Phone books
- Newspapers
- Brown paper bags
- Glass bottles and jars
- Aluminum cans, tins
- Steel Cans and empty aerosol cans

clean plastic pubs (i.e. yogurt, detergents, etc)



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Into the Streets

Alec Westerman
Staff Writer

"We're trying to make an impact," said Zach Aman, organizer of Into the Streets, a group that gives students an opportunity to participate in community service. The group, which has been around for a number of years, has always had that mission. However, this year, some aspects of the program have changed.

In the past, Into the Streets was held in April. An unfortunate side effect was that it conflicted with exams and hectic end-of-semester schedules. On account of these problems, Into the Streets was rescheduled to an earlier date. This year, it started in January.

Whether due to this rescheduling or due to more information about the event being available throughout campus, more people signed up to participate in this year's Into the Streets than in years past. According to Aman, "We had almost 100 people sign up during MLK Day."

This year, another thing has changed - the type of service done. According to Sarah Hoky, "We wanted to do something more personal." In the past, Into the Streets consisted of labor that distanced volunteers from those who reaped its benefits. This year, the interactions were face to face.

Students involved in the group

have been to Ronald McDonald House to prepare food and have been downtown on Washington Avenue to distribute hot chocolate. Also, in an event postponed until April, students will throw an exhibition on science and engineering as an outreach program.

Aman commented that, "The exhibition in April will be absolutely phenomenal." The exhibition is intended to be fun, but also help children explore the areas of science and engineering. Aman continued, saying, "Activities like this embody the essence of engineering, in that we serve as a bridge between the depths of science and the rest of the world."

Aman emphasized the importance of engineers getting out into the community and serving. "We come to this institution to develop our scientific skill set but we can only be effective when we understand our purpose in a broader context."

The exhibition remains ahead. According to Hoky, it is not too late to get involved. "If groups still want to do an exhibit, they still can, or if they want to volunteer they still can, too."

In the words of Hoky, "It's a blast"

In order to participate in the exhibition, contact any one of the organizers: Amy Dubetz at adubetz@mines.edu, Sarah Hoky at shoky@mines.edu, or Zach Aman at zaman@mines.edu.

Geek of the Week

Andrew Ferguson
Staff Writer

[Oredigger] Do you consider yourself a geek, a nerd, or neither, or both?

[James] Probably both. I was told though once [that] to be geek, you had to be paid.

What is one of the geekiest thing you have done in college?

I wrote a whole bunch of MATLAB scripts to complete repetitive homework I had in this one class.

What's the geekiest nickname you've ever had?

Electrobrain would definitely be that.

And how did you get that title?

In middle school, I turned every school project into an electronics project. And getting a ham ra-

dio license in fifth grade didn't help that either.

Who are your geek heroes, and why?

Gotta say, of course, Bill Nye The Science Guy... goes without saying I think. Data, from Star Trek, because he struggles with humanity.

So you like Star Trek better than Star Wars?

Oh yea. Star Trek's way more scientifically structured. There's method and reason to what they do instead of just making up stuff.

What sound or noise do you love?

V8 engine with [a] turbo charger.

What sound or noise do you hate?

The Red Alert Star Trek sound on my alarm clock going off in the morning.

Do you have any hobbies?

Amateur radio, of course. Analyzing the caloric content of non-dairy coffee creamers by process of fireballs; my friends and I do that frequently. I do IT administration for a small private school for no pay, so I guess that's a hobby.

What are your plans for after graduation?

Get my master's degree at Mines. And then some black box project at Lockheed Martin; maybe be a Missile Mother.

If you weren't an engineer, what would you do?

Airplane pilot would be cool. Maybe railroad engineer.

Do you have a favorite motto?

I embrace Murphy's Law.

How many plaid shirts do you own?

At least ten. I hate solid color shirts. If it's going to be a stripped shirt, vertical lines only... no horizontal.

Computer languages. Are you multilingual?

C++, Assembly, VHDL, and MATLAB script... even though it's just watered down C.

Do you own any 20 sided die?

No.

What class is your favorite and why?

Microcomputer Architecture Class [EGGN 482] was pretty sweet. We got to work with the hardware. Advanced Engineering Math was totally cool. And why? We studied the math the behind breaking signals down into every electrical engineer's favorite wave, the sine wave.

Make up a new variable symbol.

In the spirit of Scott Strong math, it should be something fast, strong, agile. Something simple like a smiley face, or pumpkin. Or any seasonal vegetable. Or only when appropriate, a Starfleet badge.

What about the ratio?

Rolls eyes



ANDREW FERGUSON / OREDIGGER

Sorority recruitment

LB Williams
Staff Writer

Informal sorority recruitment commenced and concluded last month with house tours, coffee, ice cream socials, and lots of laughter. Events were designed for potential new members to become better acquainted with the sororities. Colorado School of Mines (CSM) girls had the opportunity to consider an all-female community environment while the sorority chapters looked to embrace new friends.

Most CSM students would not think of joining a sorority or fraternity as a priority. Combined with the Mines schoolwork load and extra social obligations, such as Homecoming float building and charitable fundraising, a busy schedule is bound to occur. Sigma Kappa member Roxanna Meza says the base commitments are totally manageable. "Because you're doing them with your best friends, the activities actually feel special and effortless."

Academics are the priority for the CSM sororities. They each have study nights and amazing class notes from prior years for their members. A subtle rivalry does exist between the houses, including the fraternities, but it is all in fun and in everyone's best interests. They compete annually for honors such as "Best Pan-Hellenic GPA" and even a "Greek Weekend

Play-Doh With Plato award."

CSM girls say sorority life has developed them into more well-rounded young women. Instead of being a specific, single-purposed club, a sorority allows for a variety of interests to flourish. Individuals are welcomed. Joining a sorority is about forming bonds, sisterhood, and lifelong friendships.

CSM has three sororities with brand new houses on campus. Each house has its own unique vibe and traditions. Are they equally attractive to sorority-inclined students? Yes. All three sororities had to decline interested girls during this spring's recruitment cycle. Disappointed girls were all encouraged to continue visiting their favorite houses over the semester and to return in the fall for a potential bid.

It is understood that the decline is not personal; it is a matter of ruled capacity. Each sorority is allowed a chapter maximum of 45 members. This includes all current, undergraduate-enrolled sisters living inside and outside the sorority house.

More 'spots' are available in the fall because more graduations occur at the end of spring semester. Fall rush is the official recruitment period for the academic year for all Greek societies on campus. There are more events, free food, and friend-making opportunities during that formal period. All undergraduates are welcomed to check it out.



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PASES LUNAR NEW YEAR

The Professional Asian Society of Engineers and Scientists (PASES) 2009 Lunar New Year festival drew a vast, diverse crowd. Attendance was so great, event holders had to bring in extra food, selling out twice. This was good news for the group, since the festival was held to raise money for a national PASES conference. They are the only professional group on campus that does not have a national conference already in place.

Lisa Truong and Ricky Nguyen emceed the entertainment portion of the evening. Attendees were entertained by a variety of traditional Asian activities. The National Martial Arts Academy performed

a traditional lion dance and performed a modern Wushu exhibition. The Christiana Yeh Dance Studio performed a selection of traditional dances performed by a varied group of dancers, including the Tai-Ping drum dance, the fan dance, the silver-plate dance, the umbrella dance, the ribbon fan dance, and the peacock dance. The CSM judo and taekwondo groups gave exhibitions for each style of martial arts, as did the CSM karate club. The CSM breakdance club also performed. One of the most energetic performances of the evening was given by Mirai Daiko, an all-girl taiko drumming group.



ALL PHOTOS AND ARTICLE LILY GIDDINGS / OREDIGGER

Music Review: *Mine*, Matt York

★★★★★

Ben Johnson
Staff Writer

Background
January 20, 2009, saw the release of a refreshing album by a relatively new Canadian artist, Matt York. **Under the Streetlights** was released in 2006 as York's first album, **Wedding Day with Grace** (2008) was a fair sophomore effort accentuating his busy tour schedule, but **Mine** should attract even more attention to this very talented artist. With his acoustic/funk/jazz style and a voice reminiscent of John Mayer, widespread popularity should not be far off. Fans of Stevie Wonder, Bob Dylan, John Mayer, and Dave

Matthew's Band will thoroughly enjoy listening to this album and will remember a style that has nearly been forgotten in modern music.

Memorable Song
Reflecting on times of difficulty and trial. "Hard Days" shines even though it is one of the slower songs on the album. The lyrics transport the listener to a time when jobs were not guaranteed, when one had to struggle to make a living, when perseverance was lauded. He likens that time to the current economic hardships and implores the current generation to remember the trials of previous

generations and to push through until better days. A children's choir heard in the background aids York in capturing a feeling of desire for a better life which almost sounds like a mournful, but passionate,

that might be ignored or seem slightly out of place on the album. The track starts off with an up-beat, funk-style intro which is only found on one other song. The rest of the song strays from the style of the intro which turns out to help the song but leads to more questions of why that intro was there in the first place. Most of the album is a slower tempo which makes the whole song seem somewhat distant from the rest of the record. York's singing saves the odd start and the song winds up not being a terrible tune, but simply unmemorable.

In Closing

Full of catchy tunes and stylistic changes, *Mine* is a great album for those who enjoy anything from acoustic to jazz to pop.

African spiritual.
Forgettable Song
"Give Me Love" is not necessarily a forgettable song, but one

Starting with "Death Came a Knockin'," a captivating a *cap-pella* tune, the album's tone was set. Full of catchy tunes and stylistic changes, **Mine** is a great album for those who enjoy anything from acoustic to jazz to pop. This album is a collection of pleasing tunes from an under-recognized artist who has great musical ability and a love for grooving. Many appearances on a variety of tours around the country give fans the ability to see him live and York can also still be found playing in those clubs up in the northeast where he resides. Although Canada was the first to acknowledge the talent of Matt York, look for the America to catch on soon.



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Beer Review: A world of beer

Akira Rattenbury
Staff Writer

Digressing from my usual desire for American brews, I am kicking off a series of foreign reviews. The new Obama administration, sans foreign relations black hole, has me curious about the outside world again. Suggestions would be appreciated: go to www.oredigger.net.

Tsingtao Lager: 3/5
Thanks to America's unhindered lust for cheap products, China enjoys a hefty, near monumental, trade surplus over the greatest economy in the world. Everything from the freebies at Career Day to your iPod is mass-produced for hungry Americans.

Tsingtao, a Chinese import lager, represents only a small portion of China's overall manufacturing offense. This is unequivocally surpassed by the U.S.'s dominant strength in variety and quantity

of adult beverages. Prideful American posturing aside, Tsingtao is remarkably unremarkable. It is more along the lines of ubiquitous Chinese plastic goods than a standout feat of craftsmanship like the Three Gorges Dam or the "Bird's Nest" stadium from the Olympics this summer. After finishing my first beer, I was reminded that the most populous nation in the world ought to have a generic and ecumenical beer just like the US.

Tsingtao does hold its ground even though it is essentially just another pale lager generated for mass consumption. It stands up against its flavorless brethren Budweiser and Miller and roughly matches Rolling Rock. Compared to its Asian roots, Tsingtao falls short of the slightly more unique dryness of an Ashahi or Sapporo and lacks the zesty infusion of rice you might crave, like Taiwanese beer.

The bottle pours a thin head of pale, corn-yellow, translucent fuzz. Minimal lacing and a distinct lack of carbonation make it less poundable than a Bud, but more enjoyable and crisp for its singularly distinct flavor: Skunkiness.

That sounds bad, but that's its flavor. The aging process and storage life of lagers in general make the style ideal for skunking up a bit and Tsingtao delivers. This is not bad. The bitterness and aromatics remind me more of the beach than the snowy environs of Colorado. The zip (aka skunkiness) lends a grassy taste, making this an ideal bovine beer if cows drank.

Tsingtao is touted as the "finest beer in China." While possibly true as my experience in Oriental suds is limited, I will grab a rack of Extra Gold instead if I'm keen for a lager fix. Tsingtao is still worth a try at least as a refined rendition of the most common beer style in the world.

Must See Movies

Foreign Films

Benjamin M. Weilert, Staff Writer

Far too often, foreign films don't do well in America because of the mono-lingual tastes of the American consumer. No one wants to sit through 2 or more hours of subtitles. However, these people are missing out on some fantastic films. There is much to gain when watching foreign films, as they are a window to other cultures different from our own. In the spirit of diversity, which Mines has often endorsed, this week's Must See Movies looks at a few foreign films that everyone should watch.

1. *Shichinin no samurai* [*The Seven Samurai*] (1954)

Many consider *The Seven Samurai* one of the greatest pieces of work in all of film. This Japanese movie has been imported through an adaptation of the basic plot in the film, *The Magnificent Seven* (1960). However, nothing can quite compare to Akira Kurosawa's original masterpiece. Set in Japan in the 1600's, the plot revolves around a small village that has been frequently attacked by a group of guerrilla thieves. In order to save their village, the village elders hire seven unemployed samurai to protect their town. Receiving nothing in payment but food and shelter, these seven misfits manage to repel the thieves and protect the village. Despite its three and a half hour length, *The Seven Samurai* deserves a watch due to the quality of the emotion, drama, and action.

2. *La Vita é bella* [*Life is Beautiful*] (1997)

Perhaps the most memorable aspect of this film came during the 1999 Oscars, when Roberto Benigni walked across the tops of the chairs to receive his Best Actor Oscar. One of the other Oscars that *Life is Beautiful* won that year was Best Foreign Language Film. This Italian film showed the power of positive thinking, even during the tragedies of World War II. The main character, Guido (Benigni, who also directed the film) takes an approach to his life that at times feels derivative of Charlie Chaplin. In the Italian town of Arrezzo, Guido searches for love as the powers of Fascism and anti-Semitism gain influence in his government. Eventually, he falls in love and continues on his romantic journey, gaining a son in the process. As the war progresses, he uses games and imagination to keep his child from being killed. In the end, *Life is Beautiful* demonstrated that life can be beautiful, even in the darkest times.

3. *Persepolis* (2007)

It has been many years since the classical, 2-D animation style has been used for a feature length film in America, which is why one must go to the foreign market to find animated fare of this quality. Spoken in French and based off of the graphic novel of the same name, *Persepolis* is an autobiographical tale of Marjane Satrapi. Set in 1980's Iran, we follow Marjane as she grows up through multiple revolutions. From a Czar to an Islamic state to war with Iraq, the instability of Iran causes Marjane's parents to send her to Europe for safety. However, the fact that she is from Iran causes some tension at first, due to racial profiling and stereotypes. Eventually, her homesickness gets the better of her, and Marjane heads back to Iran. *Persepolis* was animated in the black and white style reminiscent of the original graphic novel, which ends up being a strong vehicle for the beauty and violence of this film.

For Homework – See *Wo hu cang long* [*Crouching Tiger, Hidden Dragon*] (2000)

Ski team season goals

Jake Rezac
Content Manager

"It's just something unique... you get to spend four or five weekends of the year at a resort. Who else gets to say that?" Ski Team Vice President Lucas Moore said about competing for the team. Moore, along with the fourteen members of the Ski Team, race four weeks of the year, competing in the Rocky Mountain Division of the US Ski and Snowboard Association. Usually, around 80 girls (4 from the Mines team) and 110 guys (10 from the Mines team) compete in separate men's and women's divisions. These participants come from ten or fifteen schools. Nine of the schools are colleges in the area, and the occasionally high schools in the area compete. According to the Ski Team's website, both the men's team and the women's teams can have up to seven members, five of which score points for the team. The other members still race, though their points do not help the team. Despite this, according to Moore, "Pretty much everyone competes." Of the five members whose scores count, the scores of the top three count for the overall team score, with the team who has the lowest overall time winning.

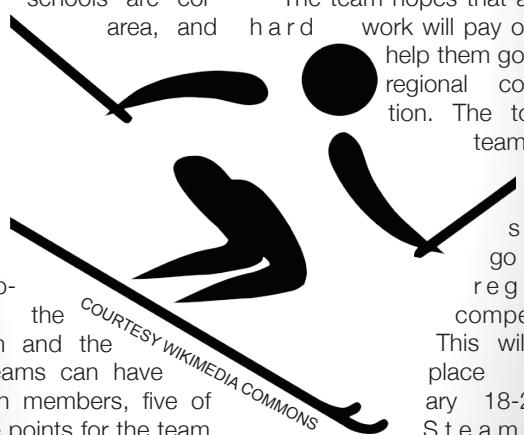
In this year's races, the Mines team has fared fairly well. In general, according to Moore, "We've got one [team member] in the top twenty, another two consistently in the top forty, and others all throughout the middle of the pack... we've consistently got a

good spread." Overall, the team placed fourth in their first race at Telluride, which was a grand slalom race, and third at their second race at Beaver Creek, which was a slalom race.

In order to do so well, the team trains hard both during the season and in the off-season. In the fall, according to team member Dan Bulfer, "We weight lift, do cardio exercises – the standard exercises for any sport." In the spring, they do significantly more work. "We spend about 72 hours a week on the Ski Team during the season," according to Moore. This includes the races, weight lifting, and training at Echo Mountain every Thursday for about four hours.

The team hopes that all their hard work will pay off, and help them go to the regional competition. The top six teams from their division go to the regional competition. This will take place February 18-21 at Steamboat Springs. If they can make it to the regional competition and do well enough, they will go to the national competition. Though the team members weren't optimistic about making it to the national competition, they said that individual team members (including one current team member who placed third in the regional competition recently) had been to the national competition before.

As of writing, the team was competing in a grand slalom competition at Winter Park, and will be competing next weekend at Loveland.



CSM Men's Ultimate Frisbee

Conditioning, practice and "Trouble in Vegas"

Kristin Chuchwa
Staff Writer

Are you down with entropy? The Men's Ultimate Frisbee team is! The team, which is named Entropy, has been active at Colorado School of Mines (CSM) for about 10 years. Currently, the team has 20 active members who participate in practices three days a week, in addition to one or two conditioning workouts. Practices are held on the intramural fields and condition in the recreation center.

This may seem like a large time commitment, but as according to club president Todd Gedvilas, "The team is a committed group, we definitely try to put out a strong team." This commitment appears to pay off, as Entropy plays competitively and successfully against teams from other local universities, most of which are larger than CSM. Some of these institutions include CU-Boulder, Air Force Academy, Colorado State University, Colorado College, and Denver University.

The Men's Ultimate team at Mines is part of the Ultimate Players Association (UPA), a national organization devoted to the sport. Competi-

tions for the men's Ultimate team are based on tournament play. Tournaments with multiple teams usually take place over a weekend and the team with the most wins is ranked highest. The CSM team normally plays three or four tournaments during the spring semester. At the end of the season, the highest ranked teams attend sectionals, an event that is equivalent to a championship. Gedvilas noted, "This year, one of our goals is to take top three in sectionals." The team will be attending the "Trouble in Vegas Tournament" from February 6-8. Teams from all over the country vied for a spot to compete and the event is known to have a waitlist. After submitting a bid

to qualify for the event, the CSM men's team was selected to be one of 80 men's teams participating this year. "It's the biggest tournament of the year for us! It lasts three days and is the highlight of our season. We are definitely excited!" said team treasurer and captain Troy Wojick.

Entropy has a dedicated membership, but they also have six to eight seniors graduating this year. Any potential new players are welcomed. Wojick describes the team as "A good mix of guys, from competitive players to more laid-back members. They are a fun group." Gedvilas noted that "most people don't start playing Ultimate until college. The Ultimate community is really receptive to new players; sometimes our alumni help to coach and teach new players." Wojick added, "We are always willing to take more players. If anyone one wants to come out, we can never have too many players. It's a great place to have fun and play Frisbee."

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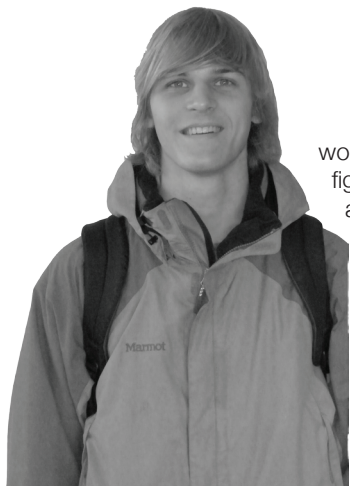
A hypothetical universe: snow days

Roby Brost
Staff Writer

Children greet many a snowy night with excited anticipation. As soon as the first fluffy flakes begin to fall, the plotting begins. Fingers cross, little eyes watch the news intently, and perhaps even a snow dance or two (Calvin and Hobbes style) is performed. As we get older, those snowy, sleep-in days, full of sledding and snowman building decrease in regularity until at last fingers are crossed in a last futile hope that there will be just one more day to finish that project. Here on this beautiful campus, those idyllic snow days are a thing of the past. However, the idea of a hypothetical universe is still very much alive. This past week, students around campus were asked the following question: "In a hypothetical universe, there are still such things as snow days for college students. What would you do with your snow day?" The overwhelming first choice was to catch up with homework. This is however, a hypothetical universe, and the snow day could not be used to finish homework.

"I would go out and make a ton of snowmen for a snowman army. There could even be little mini snowmen if they stood around outside for long enough... Then I would position the army strategically around the President's house, or the man who makes the snow day decisions, so that they wouldn't melt till summer, and the snow day would go on and on,"

Valerie Hickman



"I would go out and play in the snow! I would build a snow fort and have snowball fights. Then I might build a saucer track and go saucering with my saucer down the track (which would of course have jumps and other amazing things). I've never really been into snow angels, but yeah, there would definitely be some snowball fights."

Taylor Embury

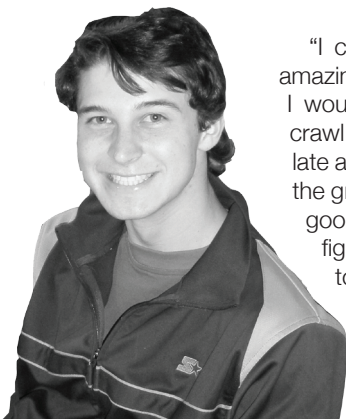
"I would go outside and have a snow cone, made with real snow."

Chelsea Newgord



"I can't even imagine it. It would be amazing. A day off from school? Wow. I would probably wake up around 11, crawl out of bed have some hot chocolate at the Slate, then check to see what the group is doing... Probably get some good runs of sledding in. Snowball fights, they are practically mandatory for a snow day... Then I would go back to my room and watch Futurama or something. That would be my snow day."

Daniel Morrison



ALL PHOTOS ROBY BROST / OREDIGGER

ASCSM on plus/minus grading

K. James Duffy
Student Body President

Over one hundred students gathered for the Faculty Senate meeting last November to express their concern over the proposed plus/minus grading policy for undergraduates. Together, we stood up and conveyed to the faculty, in no uncertain terms, that students must be considered. Critical campus issues can and should be decided in concert with the individuals whom they affect.

That November afternoon, both students and faculty alike exhibited the utmost respect for one another and as a result, the campus community avoided a hasty decision and further benefited through the acknowledgement of the perspective of CSM students. Specifically, the resolution to implement the plus/minus system was deferred until a newly formed ad-hoc committee, consisting of both students and faculty, delivers a recommendation.

As principle members of the ad-hoc committee, ASCSM, your student go v - ern -

ment, is committed to representing the students of Mines in an accurate, accountable, and transparent manner. Central to this commitment is a dedication to delivering facts.

A plus/minus grading system is an academic performance metric used to rate student achievement with finer gradations than a standard letter scale. This is accomplished by adding a "+" or "-" to a given letter grade, affecting the weight of the grade by an increment or decrement of 0.3, respectively. Given the typical 10% range of a single letter grade, the top 3% would be designated a plus grade, while the bottom 3% would be reserved for the minus grade. Just as in the standard letter scale, a professor could choose to curve a class however they see fit and thus the percentages could change.

The faculty of our school is largely in favor of such a system. They argue that it would provide a higher degree of resolution in the grading scale; necessitated on the premise that CSM is in need of a more accurate way to measure student achievement. This need, they claim, is in part because of grade inflation; a theory supported by one faculty member based off of the fact that 16 students graduated in May, 2008 with a GPA of 4.0. The faculty also desires this to finally realize a uniform grading policy for undergraduates and graduate students alike.

The faculty is sincere in their efforts and wants what is best for the institution. As students, we, too, have a responsibility to the institution and to its future. While not all students are opposed to

the system, a vocal majority has spoken in opposition.

Even though we, the students, may come to the conclusion that this policy should not be enacted, we are still faced with a disconcerting situation. The faculty is within their legal right to change the grading policy immediately and in isolation from dissent. So, do we therefore march out of class in protest? Do we demand and disrupt until the faculty relent?

No. We must live up to higher standards, demonstrating our character, integrity, and academic responsibility. We must be a model of civility in debate, conscience in reason, and reflection in action.

Receiving no fewer than one hundred fifty emails since news of the plus/minus system broke, ASCSM is armed with the intent of the student body and ready to negotiate in good faith.

Many students are particularly concerned with the immediate implementation of the system and suggest a

grandfather clause to the policy. The registrar has few tools to accommodate this compromise. Armed with only a proverbial "on/off switch," they cannot logistically respond to a complicated set of parameters that relates students to policy applicability.

Therefore, ASCSM is proposing that the grandfathering be executed through course numbering. The first year of implementation, only 100 level classes would use the system; the second year, only 200 level classes, and so forth until the system is completely integrated with all class levels. Consequently, the onus would then be on the professors to report grades according to appropriate grading policy, not the registrar.

This is not a perfect solution. Some students may find themselves in two or three years being affected by the policy in a lower division course. In spite of this and given the alternatives, this compromise would ensure that a relatively minimal amount of students currently enrolled would be graded in this fashion.

Students have also expressed concern that the current policy allows for an A- and A, but no A+. And while few of us have received high A's, the argument for including the A+ is that it equalizes the A-. Thus, if you are being penalized for earning a low A, professors should give students

the opportunity to be rewarded for a high A. And since an individual professor may curve their grading scale, this nuance would affect a number of students.

To remedy the situation, ASCSM is optimistic that the faculty will add an A+ with an associated GPA weight of 4.3 to the policy. However, no cumulative GPA could exceed 4.0, such that performance would be calculated with a smaller baseline.

Of final concern to many is the notion that a plus/minus system would significantly lower average GPA's. Anecdotal, this appears to be the case. How many times have you just slipped by with an A, B, or C? Unfortunately, statistics and case studies do not concur with this notion.

Studies conducted by educational institutions and major universities alike have concluded in large number that the plus/minus system has a negligible affect on the average GPA. Additionally, seven out of thirteen "peer institutions," as denoted by the faculty, are currently utilizing this system. I encourage the entire campus community to research these findings and their implications for our school.

The ad-hoc committee of students and faculty established at the November 25 Senate meeting is set to meet in the coming days to bring these compromises to the negotiating table. I am confident that the students and faculty of this committee will be willing to engage in honest dialogue and advance the issue on sound and reasoned arguments.

Whatever may come of these discussions, ASCSM will communicate the outcome to students. This will be done as a continuing conversation with the community in which feedback is solicited and accepted.

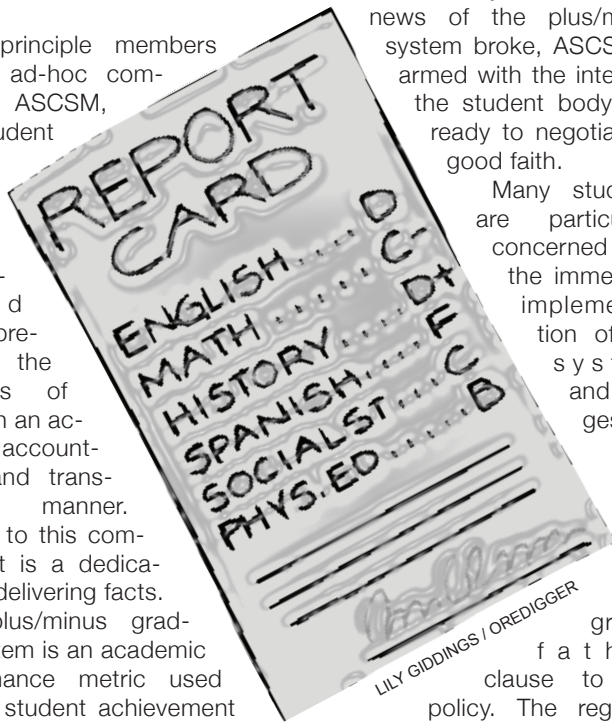
The school depends on committed students; both to academics and to the community. Keep the issue alive, keep your voice alive. Use the tools at your disposal to influence our common outcome. Talk to your fellow students, express your opinions to your professors and always keep your elected student leaders accountable.

Do not hesitate to contact me at kduffy@mines.edu. I want to hear from you. If you feel ASCSM's handling of this issue is unsatisfactory, let us know how we should proceed. Together, we will work towards a common solution that is beneficial for the entire community.

Best Regards,

Kevin Duffy

Student Body President
Colorado School of Mines



Fool's Gold

“Super Bowl XLIII: Return of the wardrobe malfunction”

Gmail: Mixed mailbag

Janeen Neri
Coolheaded Postal Worker

Academic Computing and Networking is still unsure whether Mines webmail should be switched to a Gmail-based service. “[The contracting issue is] only the minor problem,” said AC&N’s Travis Key, “the main issue is what, exactly, the students want in a webmail service.”

The greatest concern of AC&N is whether Mines students would be willing to switch from the familiar Mines webmail service to a completely new interface. “You know how people are with technology,” said Key, “they learn one system, and when they have to switch, they take a major hit to productivity. This is especially true for Mines students.” Also brought up was Gmail’s close to unlimited storage space. When combined with Gmail’s almost legendary spam filtering, the user does not need to perform a checklist of maintenance at each login.

“Our worry,” said EPICS professor Obadiah Garow, “is that those whippersnappers will not learn to decide what is important to keep and what they have to throw out, like we did in the good old days. Not when they can just use that newfangled ‘search’ thingy to find a particular correspondence without lifting a finger to shuffle through their unsorted

mess!”

A similar concern centers around Gmail’s autocomplete function for email contacts. In Gmail, users can begin typing the name of anyone in their contact list into the “To:” box and Gmail will automatically fill in the corresponding email address. In Mines webmail, as Garow put it, “they can take the two minutes out of their life to look in their electronic Rolodex; really, how hard is that?” Gmail also supports “groups”, which allow the user to specify a set of email addresses, such as those of their team members in a group project, that can also be automatically filled in at a key-word.

School officials also fear that students will become complacent when “they can send attachments without their webmail client twitching on the floor,” said Garow, “Telling them

that this is a good time to write a nice, personal letter instead of sending their honking great files straight across cyberspace.”

The student response can be summed up in the words of freshman Gary Mallard: “No wonder my professors take so long to respond to my emails! Maybe if they forwarded it to Gmail like freaking everyone else on campus does, they might actually be able to get stuff done.”

For more information visit <http://gmail.google.com/mail/help/about.html>



MIKE STONE / OREDIGGER

Gmail Login. Though user names will be the same, a non-traditional 18 character string of numbers and letters will be users’ new passwords.”

STANDARD DEVIATION

BY KYLE SANDERS



2009 WWW.CODEDREDCOMICS.COM 2009

STANDARD DEVIATION

BY KYLE SANDERS



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—sudoku—

	4				5	6	1
2				5	9		8
	3		6		2		
		1		3			5
9	7		5	8		4	6
3			4		1		
		5		2		1	
7		3		6			9
1	9	4				5	

Puzzle by websudoku.com

FOOL'S GOLD-MINES ACRONYM ANSWERS:
(1) American Institute for Chemical Engineers
(2) American Society of Civil Engineers
(3) American Society of Mechanical Engineers
(4) Association of Computing Machinery
(5) Association of Engineering Geologists
(6) Institute of Electrical and Electronics Engineers
(7) International Society of Explosives Engineers
(8) National Society of Black Engineers
(9) Society of Hispanic Professional Engineers
(10) Society of Mining, Metallurgy, and Exploration
(11) Society of Petroleum Engineers
(12) Society of Physics Students
(13) Society of Student Geophysicists
(14) Society of Women Engineers
(15) Women in Science, Engineering, and Mathematics

Mines Acronyms (MA) Where TLC meets EIT

Mike Stone
BAAACGWETB

Colorado School of Mines (CSM) celebrates itself on its diversity (D). As a result, we have many professional organizations (PO's) and national chapters (NC's) available to students on campus. Do you know who they are and what they are here for? Check out inside.mines.edu for club details, but for now, just try to figure out what all the acronyms mean (JTT-FOWATAM).

- 1) AICHe: _____ for _____
- 2) ASCE: _____ of _____
- 3) ASME: _____ of _____
- 4) ACM: _____ of _____
- 5) AEG: _____ of _____
- 6) IEEE: _____ of _____ and _____
- 7) ISEE: _____ of _____
- 8) NSBE: _____ of _____
- 9) SHPE: _____ of _____
- 10) SME: _____ of _____, _____, and _____
- 11) SPE: _____ of _____
- 12) SPS: _____ of _____
- 13) SSG: _____ of _____
- 14) SWE: _____ of _____
- 15) WISEM: _____ in _____, _____, and _____

When you're done, check your answers with those at the bottom of the page. How many did you get right? (Every word must be right down to the letter) Write that number here: ____ Now, compare!

15-14: Einstein. Congrats! You know all the acronyms for the societies on campus! Now, if you could only remember to write your name at the top of your homework, you might get an A in Physics every now and then...

13-12: Nerd. Hey there- not bad! You've got a Lambda Lambda Lambda personality, but not as much of the brain power to support it. Better go ask your homemade robot to help you on the next one.

11-9: Wise Guy. Ok, you didn't do so hot, but don't worry! I'm sure there are many mid-level managerial positions at folding engineering companies for you to work at when you graduate!

8-6: Wimp. Now, either you've been living under a rock or you think "American" begins with a silent "P." Don't blame the fact that you can't spell on being an engineer - blame it on all that paint you sniffed in junior-high.

5 and below: Simple Jack. There's a school just about 20 miles north of here called CU-Boulder. Oh, sorry - CU stands for Colorado University. I think you belong there for the good of the Mines Community as a whole. Also, please don't ever have kids.



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Deadline: Thurs. Feb 19th	4 vs. 4	Skull & Crossbones	\$600	\$600	Deadline: Thurs. Feb 19th
\$800	Deadline: Thurs. Feb 5th	Skull & Crossbones	\$800	Pepsi Center 4pm Tickets \$22	Captain's Meeting: Sun. Feb 22nd @ 4pm
\$1000	\$1000	Skull & Crossbones	\$1000	Good for Avalanche game @7	

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